

TAXONOMIC CHANGES AND NEW GENERIC SYNONYMIES IN THE
TIPHIID WASP SUBFAMILY THYNNINAE (HYMENOPTERA: TIPHIIDAE)

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Abstract.—A number of taxonomic changes are made in the generic status and species composition of six thynnine genera, four from Australia and two from South America. **New generic synonymies** are given, with *Pogonothynnus* Turner made a **junior synonym** of *Zaspilothynnus* Turner, *Aspidothynnus* Turner a **junior synonym** of *Tmesothynnus* Turner and *Glottynoides* Kimsey a **junior synonym** of *Scotaena* Turner. Consequently species assignments have to be changed. **New combinations** for *Aspidothynnus* are *collaris* (Guérin de Meneville), *dispersus* (Turner), *humilis* (Erichson), *ingrediens* (Turner), *iridipennis* (Smith), *platycephalus* (Turner), *truncatus* (Smith), *strangulatus* (Smith), and *zelebori* (Saussure); for *Zaspilothynnus fenestratus* (Smith), *fulvohirtus* (Turner), *morosus* (Smith), and *vestitus* (Smith), and for *Scotaena brunnea* (Fox), *clypearis* (Duran), *duckei* (Smith), *fastuosus* (Smith), *genisei* (Kimsey), *rosenbergi* (Turner), and *vigilii* (Bréthes).

Key Words: Tiphiidae, Thynninae, *Pogonothynnus*, *Zaspilothynnus*, *Aspidothynnus*, *Tmesothynnus*, *Scotaena*, *Glottynoides*

Phylogenetic analyses of the genera of Thynninae currently underway have resulted in the need for some additional generic synonymy. The genera discussed below all end up as sister group pairs in these analyses, without diagnostic apomorphies to separate them. This prompted their reexamination, which led to the synonymies proposed below. Three genera are synonymized. Two, generic pairs are in the tribe Thynnini from Australia. The third pair is in the Scotaenini from South America. A number of species assignments need to be changed, as given below, as a result of these synonymies and from the examination of primary types in The Natural History Museum, London, and Humboldt Museum, Berlin. Species where the primary types have been examined are indicated by an asterisk (*). When types have not been seen, the generic placement given by Given (1954) is followed.

ASPIDOTHYNNUS TURNER

Turner (1910b) described two new genera, *Aspidothynnus* and *Tmesothynnus*, largely based on male characteristics. At the time, females were known only for *Tmesothynnus*. He distinguished the two genera by the structure of the male clypeus and hypopygium. However, after examining the types of the genera and a much broader selection of species than Turner had available at the time it is clear that characteristics used to distinguish these genera intergrade between the two extreme forms represented by the types of the genera, *Aspidothynnus combustus* Turner and *Tmesothynnus zelebori* Saussure. The male hypopygium in these species ranges from apically tridentate with parallel sides to having an apicomedial spine or tooth and rounded sides (Figs. 4–7). Females associated with species placed in both groups are indistinguishable on the

generic level. Males of both genera share several apomorphic features—the subantennal sclerite and frons share a well-developed longitudinal medial carina, and in the tongue the stipes is nearly asetose, except for a row of well-separated, short setae along the inner margin, and the prementum is slender, usually elongate, and asetose (Fig. 1). The hypostomal plate on either of the oral fossa is considerably narrower than the oral fossa and is about as broad as or narrower than the prementum (Fig. 1). Other male features that distinguish these genera from others closely related include the apical flagellomeres cylindrical (not lobulate), with two tyloids, the presence of a small red spot on the vertex between the hindocellus and eye margin, and epipygium with a large, transverse carina or swelling before a thin apical rim, which varies from linear, to trilobate to strongly swollen and bilobate (Figs. 2–3). Females have the pygidium margined laterally by a carina and subtended by a long brush of setae on metasomal sternum V, and, most significantly, sternum VI is apically strongly bilobate.

None of these characters were found to clearly separate groups of species. Phylogenetic analyses of *Aspidothynnus* and *Tmesothynnus* species resulted in a single, pectinate clade, with many possible trees and no Bootstrap support for any of the branches. Therefore, *Aspidothynnus* is chosen as the senior name and *Tmesothynnus* the junior synonym (**new synonymy**).

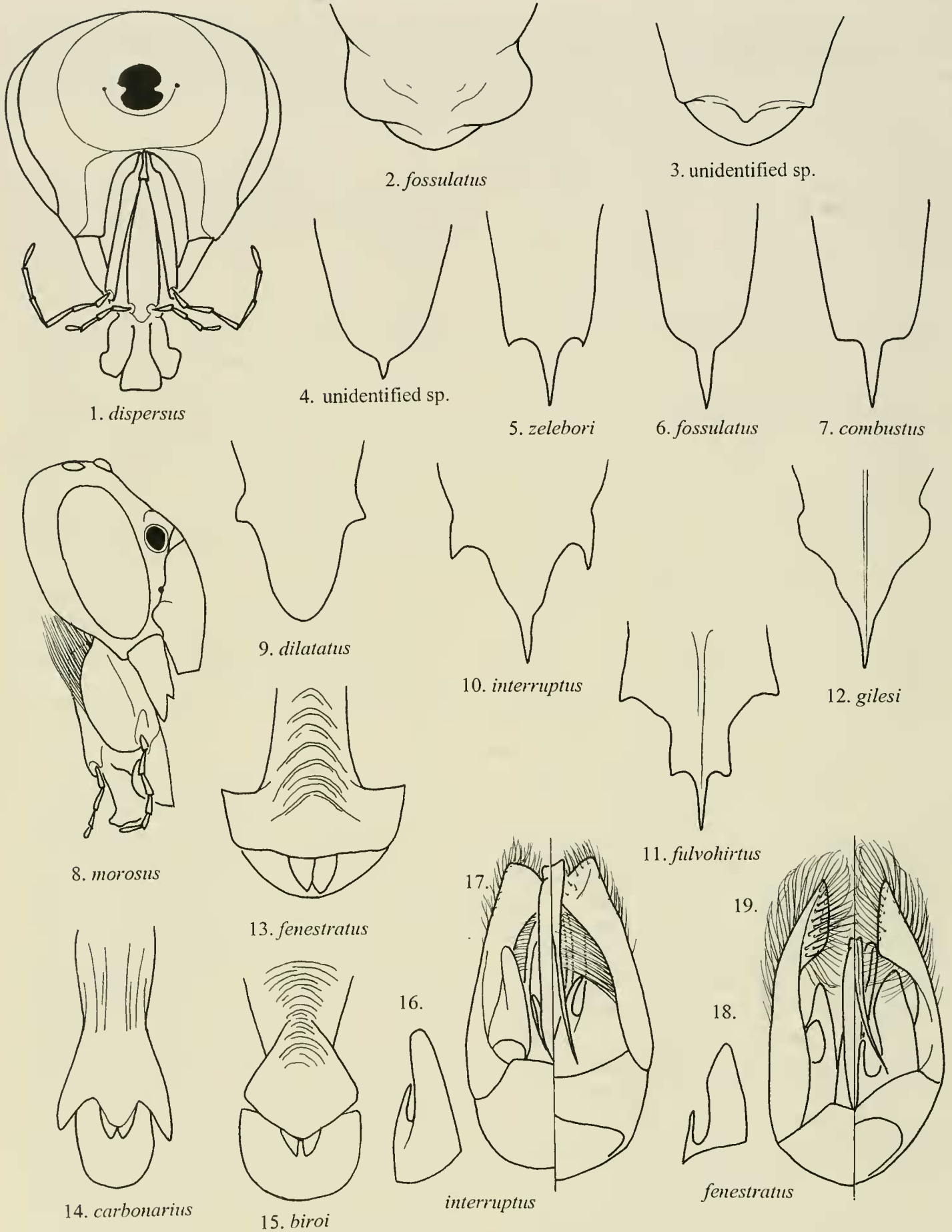
Species now placed in this revised *Aspidothynnus* are: *Lophocheilus collaris* Guérin de Meneville 1842, **new combination**; *Aelurus combustus* Smith 1859*; *Thynnus dispersus* Turner 1908*, **new combination**; *Aspidothynnus fossulatus* Turner 1915*; *Thynnus humilis* Erichson 1842, **new combination**; *Aspidothynnus ingrediens* Turner 1916*, **new combination**; *Thynnus iridipennis* Smith 1859*, **new combination**; *Tmesothynnus platycephalus* Turner 1910c*, **new combination**; *Thynnus polybioides* Turner 1908*; *Aspidothynnus rostratus* Turner 1908*; *Thynnus truncatus*

Smith 1859*, **new combination**; *Thynnus strangulatus* Smith 1879*, **new combination**, and *Thynnus zeleborei* Saussure 1867, **new combination**.

ZASPILOTHYNNUS ASHMEAD

Turner (1910b) described the genus *Pogonothynnus* on the page preceding his re-description of *Zaspilothynnus* Ashmead (1903). The two descriptions are nearly identical except for the shape of the hypopygium. Males in both genera have a strongly elevated medial platform on the epipygium, small tooth or spine on metasomal sternum VI, the same configuration of the antennal lobes and associated carina, ranging from U-shaped to V-shaped, and most species have a well-developed stival fringe (Fig. 8). The male genital capsule structure is also the same in the types of both genera (Figs. 17, 19), with the gonocoxa dorsally truncate, cuspis with large, sometimes elongate, digitate lobe on the inner margin (Figs. 16, 18), and large earlike digitus that folds down dorsally during copulation. Females in these genera have the same densely ridged metasomal terga I and II and snoutlike epipygium, which is narrowed basally with a flared, flattened posterior plate (Figs. 13–15). No consistent differences could be found between the two groups. As with *Aspidothynnus*, phylogenetic analysis of the combined species of both *Pogonothynnus* and *Zaspilothynnus* resulted in numerous poorly supported trees, with no support for two discrete clades that might represent these genera. Therefore, *Pogonothynnus* Turner 1910b becomes a junior synonym of *Zaspilothynnus* Ashmead 1903, **new synonymy**.

Included species in the combined *Zaspilothynnus* are: *Thynnus andreanus* Turner 1908; *Thynnus atrocior* Turner 1909a; *Thynnus biroi* Turner 1910d; *Thynnus campanularis* Smith 1868; *Thynnus carbonarius* Smith 1859; *Zaspilothynnus cheesmanae* Turner 1940; *Zaspilothynnus clelandi* Turner 1910c; *Thynnus crudelis* Turner 1908; *Zaspilothynnus cyaneiventris* Rohwer



Figs. 1-19. *Aspidothynnus* species. 1, Posterior view of male head. 2-3, Posterior view of male epipygium. 4-7, Dorsal view of male hypopygium. 8-19, *Zaspilothynnus* species. 8, Lateral view of male head, with antenna removed. 9-12, Ventral view of male hypopygium. 14-15, Posterior view of female apical metasomal segments. 16, 18, Ventral view of volsella. 17, 19, Dorsal (left) and ventral (right) views of male genital capsule.

1925; *Thynnus dilatatus* Smith 1859; *Thynnus excavatus* Turner 1908; *Thynnus fenestratus* Smith 1859, **new combination**; *Pogonothynnus fulvohirtus* Turner 1915, **new combination**; *Zaspilothynnus gilesi* Turner 1910c; *Zaspilothynnus hackeri* Turner 1912; *Thynnus interruptus* Westwood 1845; *Zaspilothynnus lasius* Montet 1922; *Zaspilothynnus lignatus* Turner 1910c; *Zaspilothynnus maturus* Turner 1909b; *Thynnus morosus* Smith 1879, **new combination**; *Thynnus multistrigatus* Turner 1909a; *Zaspilothynnus neglectus* Turner 1910c; *Thynnoides nigripes* Guérin de Méneville 1842; *Thynnus novarae* Saussure 1868; *Thynnus ochrocephalus* Smith 1868; *Thynnus picticollis* Turner 1908; *Thynnus pseustes* Turner 1908; *Zaspilothynnus radialis* Turner 1910c; *Zaspilothynnus rhynchioides* Turner 1913; *Zaspilothynnus rubropictus* Turner 1937; *Thynnus rufoluteus* Turner 1910d; *Zaspilothynnus rugicollis* Turner 1915; *Thynnus seductor* Smith 1868; *Thynnus siccus* Turner 1908; *Thynnus simplex* Smith 1879; *Zaspilothynnus striatifrons* Turner 1917; *Zaspilothynnus trilobatus* Turner 1910c; *Zaspilothynnus unipunctatus* Turner 1915; *Thynnus vernalis* Turner 1908; *Thynnus vestitus* Smith 1859, **new combination**.

SCOTAENA KLUG

The genus *Glottynoides* Kimsey was described for the species *genisei* Kimsey, which has an unusually modified tongue. In the original description, a strong relationship with the genera *Scotaena* and *Rostrynus* was mentioned. Further examination of male and female characteristics of *Glottynoides* and *Scotaena* indicates that the only distinctions between these two genera are the species level characteristics of the male tongue seen in *genisei*. Therefore, *Glottynoides* Kimsey (in Genise and Kimsey 1991) is a junior synonym of *Scotaena* Klug 1810, **new synonymy**.

Species included in the genus *Scotaena* include: *Elaphroptera brunnea* Fox 1898*, **new combination**; *Ornepetes clypearis* Duran-Moya 1941*, **new combination**;

Thynnus decora Smith 1859*; *Thynnus duckei* Smith 1859, **new combination**; *Scotaena duckei* Turner 1909*; *Thynnus fastuosus* Smith 1879*, **new combination**; *Thynnus flavovariegatus* Smith 1879*; *Glottynoides genisei* Kimsey 1991*, **new combination**; *Spilothynnus horni* Turner 1927*; *Elaphroptera pallida* Fox 1898*; *Scotaena polistoides* Turner 1910a*; *Thynnus pubescens* Klug 1842*; *Scotaena rosenbergi* Turner 1910a*, **new combination**; *Thynnus trifasciata* Klug 1810*; *Scotaena vetusta* Turner 1909b*; *Elaphroptera vigilii* Bréthes 1910*, **new combination**.

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